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Message: 5172560

From: fobas@lr.org
To: technical@eletson.com, operations@eletson.com
Date: Tue, 19 Mar 2013 04:16:16 (UTC +02:00)
Subject: FOBAS - Vessel: POLYAIGOS, Status <RED>, Port Corpus Christi -

FOBAS - Sample Analysis Report

Client: ELETSON CORPORATION

Our Reference: 13-000310-0-PNMA - PDZ
Report Status << RED >>
Vessel: POLYAIGOS
IMO: 9306574

Sample Dispatch Date:	14 MAR 2013
Lab Receipt Date:	15 MAR 2013
Courier Used:	DHL : 8261876033
Dispatched From:	SAN ANTONIO, TX - USA

Sample No	**1**	**2**
Port	CORPUS CHRISTI	CORPUS CHRISTI
Sampling Date	11 MAR 2013	12 MAR 2013
Supplier	VALERO	VALERO
Barge/Inst	NOT STATED	NOT STATED
Sample Point Type	MANIFOLD	MANIFOLD
Sampling Method	DRIP	DRIP
Advised Bunker Details		
Viscosity cSt	273.1	324.3
Density @ 15°c kg/l	0.9882	0.9869
Sulphur	0.976	1.93
Quantity MT	200.0	500.00
Seal Number Lab	0927336	0927340
Tag Seal Numbers Lab	1109377	1109403
Seal Number Vessel	0927334	0927339
Seal Number Supplier	0927335	0927338
Seal Number MARPOL	2942926	1109402

		Required	**Tested**	**Required**	**Tested**
Sample		1	<< RED >>	2	<< GREEN >>
ISO-F Grade(2010)		RMG380LS	-----	RMG380	RMG380
K Viscosity at 50oC	cSt	380	290.2	380	346.8
K Viscosity at 100oC calc	cSt		30.0		33.0
Density @ 15°c	kg/l	0.9910	0.9865	0.9910	0.9865
Water Content	% v/v	0.50	0.10	0.50	0.10
Ash Content at 550oC	% m/m	0.10	0.027	0.10	0.032
Micro Carbon Residue	% m/m	18.0	7.87	18.0	10.51
Total Sediment	% m/m	0.10	0.21	0.10	0.01
Total Sediment Existent	% m/m		0.07	-	-
Net Specific Energy	MJ/kg		40.90		40.56
Gross Specific Energy	MJ/kg		43.24		42.87
Sulphur Content	% m/m	0.976	0.96	1.93	2.03
Pour Point	°C	30	18	30	< 6
Flash Point	°C	60	> 70.0	60	> 70.0
CCAI	Index	870	850	870	848
Compatibility 50/50	index		1	-	-
Silicon	mg/kg		19		16
Aluminium	mg/kg		14		12

Vanadium	mg/kg	350	17	350	74
Sodium	mg/kg	100	4	100	7
Iron	mg/kg		19		17
Phosphorus	mg/kg	15	6	15	3
Lead	mg/kg		1		1
Calcium	mg/kg	30	5	30	5
Nickel	mg/kg		7		24
Zinc	mg/kg	15	< 1	15	1
Potassium	mg/kg		2		2
Magnesium	mg/kg		1		< 1
Aluminium + Silicon	mg/kg	60	33	60	28
TAN	mgKOH/g	2.5	< 0.05	2.5	0.05
SAN	mg KOH/g		0		0

Comments: Sample 1

AAA. Please confirm whether the sample is fully representative of the fuel as loaded and that the sample is taken through out the bunkering process as a continuous bunker drip sample in accordance with the instructions given in FOBAS sampling procedures manual.

RED
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1. Total Sediment Potential (TSP) as determined exceeds the limit of 0.10 % m/m as specified in ISO 8217 for an ISO-F-RMG 380 grade. TSP has been rechecked and confirmed.

2. High sediments present in the fuel may result in heavy loading on purifiers/filters and deposition in tanks which should be monitored and operational adjustments made as necessary. Additionally such fuels can lead to irregular combustion profiles; we would recommend that engine operating parameters and condition are closely monitored if this fuel is put into use.

3. In view of the above and based on this sample only, we would recommend that this fuel to be put into use whilst other fuel remains onboard so that if the problems, as described above, are severe and unmanageable then there is an alternative fuel available.

OTHER COMMENTS
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4. Pour point will require that storage is maintained above 25 Deg C
5. Minimum transfer approximately 30 to 35 Deg C
6. The fuel as tested complies with the Revised MARPOL Annex VI reg. 14.4.2
7. Aluminium and Silicon (Al+Si) should reduce to acceptable levels (< 10 mg/kg at the engine inlet) by means of onboard treatment.
8. Acid Number is considered to be at a satisfactory low level for a marine fuel and would not be expected to give rise to problems during use.
9. Compatibility test of a 50/50 blend between samples 1 and 2 gave a satisfactory rating of 1.
10. Fuel preheat approximately 124 to 140 Deg.C for 15 to 10 cSt viscosity at the engine fuel rail.

Comments: Sample 2

GREEN
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1. The fuel to the extent tested corresponds to an ISO-F-RMG380
2. Total Sediment result indicates that the fuel will remain stable during normal storage, handling and use.
3. Minimum transfer approximately 33 to 38 Deg C
4. The fuel as tested complies with the Revised MARPOL Annex VI regulation 14.1.2
5. Acid Number is considered to be at a satisfactory low level for a marine fuel and would not be expected to give rise to problems during use.
6. Fuel preheat approximately 126 to 144 Deg.C for 15 to 10 cSt viscosity at the engine fuel rail.

Note: The accuracy of the results obtained are dependant on the sample tested being truly representative of the fuel as loaded. To draw representative samples please refer to the FOBAS Sampling Procedures Manual. For further information on the MARPOL Annex VI Reg. 14 & 18 requirements and its on-going developments, please contact your local Lloyd's register FOBAS office or contact us directly on fobas@lr.org

This report is also available at http://www.fobas.com